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IDENTIFICATION OF SOURCES OF EDUCATIONAL RESEARCH MATERIALS.

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THE OBJECTIVES WERE--(1) TO ASSESS THE VALUE OF VARIOUS APPROACHES TO THE IDENTIFICATION AND ACQUISITION OF EDUCATIONAL RESEARCH MATERIALS, (2) TO ASSESS THE VALUE OF PRESENT PROCEDURES, (3) TO PRESENT A LIST OF PERIODICALS, GROUPED ACCORDING TO ESTIMATED YEARLY YIELD SO THAT DECISIONS CAN BE MADE TO SUBSCRIBE OR TO SCAN REGULARLY, (4) TO PRESENT A REPRESENTATIVE LIST OF SOURCE MATERIALS USEFUL IN DEVELOPING THE PROGRAM TO DATE, AND (5) TO OFFER SPECIFIC SUGGESTIONS FOR THE ESTABLISHMENT OF AN ACTIVE IDENTIFICATION AND ACQUISITION PROGRAM. PRIMARY SOURCES WERE DIVIDED INTO HIGH-YIELD AND LOW-YIELD JOURNALS (USING THE FACTOR OF MORE OR LESS RELEVANT ARTICLES PER YEAR). THE HIGH-YIELD JOURNALS FORMED A BASIC SUBSCRIPTION LIST, AND THE LOW-YIELD JOURNALS, A BASIC SCANNING LIST. QUESTIONNAIRES WERE MAILED TO COLLEGE AND UNIVERSITIES AND PROFESSIONAL ORGANIZATIONS ASKING THEM TO LIST PUBLISHED AND UNPUBLISHED EDUCATIONAL RESEARCH. THE LIST OF HIGH- AND LOW-YIELD JOURNALS WERE FOUND TO PROVIDE A SOUND BASIS FOR AN ACQUISITION PROGRAM. CONTINUED DEVELOPMENT OF AN EFFECTIVE PROGRAM WILL HAVE TO BE DETERMINED UNDER OPERATIONAL CONDITIONS. (HB)

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IDENTIFICATION OF SOURCES OF EDUCATIONAL RESEARCH MATERIALS

COOPERATIVE RESEARCH PROJECT NO. 1517

CENTER FOR DOCUMENTATION AND COMMUNICATION RESEARCH
SCHOOL OF LIBRARY SCIENCE WESTERN RESERVE UNIVERSITY CLEVELAND 6, OHIO

Identification of Sources of Educational Research Materials

Cooperative Research Project #1517

Staff Report

Center for Documentation and Communication Research
School of Library Science
Western Reserve University

1963

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Background and Discussion of the Problem

That the literature of the social sciences is more elusive than that of other fields,[1] and that any acquisition program demands constant attention and modification, present obvious problems to individuals or organizations concerned with the identification of the sources of educational research material. When identification is attempted in a vacuum, i.e., not under operational (user-oriented) conditions, the problems are multiplied.

These problems manifest themselves particularly during the developmental stages of an identification and acquisition program for an information retrieval system, for any successfully operated information retrieval system's identification and acquisition program is based on two fundamental considerations.

1. The identification of the users of the system.
2. The tailoring of the content of the file to meet users' needs.

The first can be accomplished more or less effectively a priori, the second can only be accomplished in an operational situation.

This investigation must therefore be considered a preliminary investigation, whose results are not intended to be applied in toto to an operational system, but rather intended as a guide for the development of an effective identification and acquisition program, and subsequently to be modified to meet users' needs.

Before specifically outlining the findings and conclusions resulting from this study, several general comments based on the Center's experience thus far in building a file of educational research literature,[2] and its experience in

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1 "...(it) is not simply a function of sheer amount of information; the state of organization of that information must be considered as well. Most social science knowledge consists of unconnected bits and pieces...." Report on the Minnowbrook Conference on Information Retrieval in the Social Sciences, sponsored by Syracuse and Western Reserve Universities, Syracuse University, July 28-30, 1961. See also Charles P. Bourne, "The World's Technical Journal Literature," American Documentation, April, 1962.

2 Pamela W. Reeves, A. J. Goldwyn, Jessica S. Melton and Allen Kent, The Library of Tomorrow-Today, final report on Cooperative Research Project 1298 and Title VII Project B-170, June, 1962.

dealing with the literature of other fields,[3] are appropriate.

In seeking information, in this case information about the sources of educational research literature, it is first necessary to define the limits of the information desired, i.e., the limits of educational research. The Center, in cooperation with members of the Office of Education, and with an advisory committee of educators, formulated a basic definition of educational research. The problems in formulating definitions, which the Center is already acutely aware of,[4] are no less formidable for education than for any other field, related or unrelated to education. To make matters worse, the collector of the information must then make a final decision regarding inclusion in the file which is based first of all on an imperfect definition, and secondly on an imperfect understanding of that definition by his correspondents. One cannot go back and say "but this is what I meant," nor can one anticipate the modifications of the definition which might usefully be made as the collector's knowledge increases.

Another decision, possibly more difficult to make than that of formulating a definition, is the assessment of quality of research, not quality of the purpose of a particular piece of research (since this is a decision outside the province of a system developer) but quality in relation to the extent to which that research meets all the qualifications of the definition. Other decisions to be made, and whose final resolution depends on operational experience, are the availability of material and the cost of acquiring that material as measured against its importance to the questioners.

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[3] Information Retrieval in Action (Cleveland: Western Reserve University Press, 1963)

[4] Allen Kent and Gordon Barhydt, "Compromise - A Key to Documentation," Datamation, October, 1961.

Objectives

Based upon previous observations and conclusions, both by the Center and by others,[5] and within the limits of the funding of this particular study, the objectives may be defined as follows.

1. To assess the value of various approaches to the identification and acquisition of educational research materials.
2. To assess the value of present procedures.
3. To present a list of periodicals, grouped according to estimated yearly yield so that decisions can be made to subscribe or to scan regularly.
4. To present a representative list of source materials useful in developing the program to date.
5. To offer specific suggestions for the establishment of an active identification and acquisition program.

Procedure

Based to a certain extent on the Tauber-Lilley study and its report of the ineffectiveness of the indexing of published Media research articles, and based to a much larger extent on the Center's experiences with the ineffectiveness of conventional indexes of published material in other fields, it has been the Center's policy to formulate lists of primary sources, divided into high yield and low yield journals. The high yield journals form a basic subscription list and the low yield journals a basic scanning list. The lists are of course not rigidly established and are subject to modification in the light of experience.

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5 Maurice F. Tauber and Oliver L. Lilley. Feasibility Study Regarding the Establishment of an Educational Media Research Information Service. (Section II.) Report for Office of Education Contract SAE 8328.

Final determination as to subscribing vs. scanning must also be based on cost and accessibility in local libraries.

To test, in a small way, the validity of this policy, 22 journals were selected from the established high yield list and 10 journals from the established low yield list.[6] Arbitrarily excluded from this selection were all journals published in foreign countries other than Canada. The current file at the Center was searched manually and one article published in 1961 was selected at random for each of the 32 journals identified. Education Index and Psychological Abstracts were selected for conventional searching. Other indexes (Industrial Arts Index, U. S. Government Res. Reports, etc.) whose yield is extremely low are more costly to search than primary sources, and consequently no attempt was made to use them in this test. In addition, each article selected was considered definitely worthy of inclusion in the file, although not pure "research" in every instance.[7]

The results of this small investigation support, though they do not prove conclusively, the correctness of the Center's judgement in applying a primary source approach to the identification of educational research material.

Of the 22 high yield journals, 17 were listed as having been indexed in Education Index, and 13 were listed as having been indexed by Psychological Abstracts (3 irregularly). Eight journals were indexed by both. A search was made therefore in Education Index for 17 specific articles. Twelve of these were found. Eight specific articles were searched in Psychological Abstracts and one was found.

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[6] See Appendix A

[7] Due to the nature of the development of the 1961-62 file, a small number of articles would not have been included had the present criteria been in use at that time.

Of the low yield journals a check was once again made to see if they were regularly indexed, and a search was made for the specific articles. Nine journals were listed in Education Index; 3 were listed in Psychological Abstracts. Of the nine specific articles searched in Education Index, 8 were found. Of the 3 specific articles searched in Psychological Abstracts, one was found.

Aside from the apparent duplication in abstracting, some interesting problems appeared. Since authors were known in each instance, the author index was searched first. To make double sure, the subject headings were also searched and it appears, particularly in Education Index, that it is possible for an article to be listed under either the author or the S. H., and not necessarily under both. The problems in identifying relevant subject headings were such that no conclusion can be reached here as to the effectiveness of searching procedures. It must be said that Education Index is very effective in listing articles within a short time after publication, in many instances one month. The inclusion lag in Psychological Abstracts is considerably longer, in some cases a year or more. Although this small sample of journals is hardly conclusive, it does suggest that the application of the primary source technique in the field of educational research literature is a sound approach.

In addition to the above, a questionnaire[8] was mailed to college and university departments of education, psychology and sociology, to professional associations, to state and local boards of education and to a selected list of foundations[9], asking them to list the published and unpublished educational research during a one year period.

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[8] See Appendix B

[9] See Appendix C

The return was as follows:

College and Universities

Questionnaires mailed	1575
Questionnaires returned	362
Percentage of return	22.9%

Professional Associations

Questionnaires mailed	1026
Questionnaires returned	329
Percentage of return	32%

State and Local Boards and Foundations

Questionnaires mailed	55
Questionnaires returned	31
Percentage of return	56%

To test the completeness of the returns for doctoral dissertations, the number of dissertations reported by the Departments of Education and Educational Psychology was compared with the number of dissertations listed under Education headings in Index for American Doctoral Dissertations for the year 1961-62 (corresponding to the report period covered by the questionnaire).

Doctoral Dissertations reported by questionnaire	483
Doctoral Dissertations reported by Index	1866

Although no yardstick is available for testing the completeness of the return in other areas, the number of bulletins and reports, reported usually in a separate bibliography returned with the questionnaire, was much higher than expected. The total number of such bulletins and reports reported by all correspondents was 612. Rather than list specific references, some correspondents

gave only an estimate of the number of bulletins and reports issued. Reported in this way were 642 bulletins and reports, providing a substantial number of leads to be investigated.

To cover the government sponsored research, a search was made for the Center by the Science Information Exchange. SIE was given the Center's definition of educational research and asked to select all proposed, currently active and recently terminated research relevant to education. Of 686 responses received from the SIE the breakdown of reports deemed relevant for inclusion is as follows:

Department of Health, Education and Welfare	
Public Health Service	8
National Institutes of Health	100
Office of Education (coop. res.)	196
Office of Vocational Rehabilitation	26
Department of the Army	10
Department of the Navy	4
Veterans Administration	18
Southern Regional Education Board	57
National Science Foundation	3
Foundations and Institutes	56
Other	9
Total number of relevant responses	496

Conclusions

Most important among the conclusions of this study is that the identification of sources for an information retrieval service of educational research materials

must be pursued actively and relentlessly.

The list of high and low yield journals provided in this report[10] should form a sound base for such an acquisition program. The questionnaires, although disappointing in relation to percentage of return, and in some categories in relation to completeness of coverage, nevertheless have enabled the Center to establish many important contacts with the most active producers of research, and in the case of bulletins and reports, have provided the Center with very valuable information.

The search by the Science Information Exchange proved to be a valuable source for government sponsored and foundation sponsored research, and as the SIE becomes more active and participation in its program grows, will become even more valuable. It is apparent from the findings resulting from the pilot phase (1961-62) and the further substantiation of these findings in this study, that it will prove far more difficult to approach full coverage for the literature of educational research than for the fields of science and technology.

The most important aspects of the continued development of an effective program will have to be determined under operational conditions: the identification of the users and the realistic appraisal of their needs.

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10 See Appendix E

APPENDIX A

Journals Searched in Education Index and Psychological Abstracts

SELECTED FROM HIGH YIELD LIST

Adult Education

The Arithmetic Teacher

California Journal of Educational Research

The Catholic Educational Review

Educational and Psychological Measurement

Elementary English

Exceptional Children

Journal of Educational Psychology

Journal of Educational Research

Journal of Engineering Education

Journal of Experimental Education

The Mathematics Teacher

Modern Language Journal

National Business Education Quarterly

Ontario Journal of Educational Research

Perceptual and Motor Skills

Reading Teacher

Review of Educational Research

School Review

School Science and Mathematics

Science

Vocational Guidance Quarterly

SELECTED FROM LOW YIELD LIST

Educational Leadership

The English Journal

Journal of Higher Education

Journal of Negro Education

Journal of Secondary Education

Peabody Journal of Education

The Personnel and Guidance Journal

Phi Delta Kappan

Social Education

The Speech Teacher

APPENDIX B

Questionnaires

WESTERN RESERVE UNIVERSITY
CLEVELAND 6, OHIO

CENTER FOR DOCUMENTATION
AND COMMUNICATION RESEARCH
SCHOOL OF LIBRARY SCIENCE

The Center for Documentation and Communication Research, under contracts, with the U. S. Office of Education, has been conducting a study aimed at the development and pilot operation of a mechanized information retrieval system for research literature in education. The system is being designed to permit detailed analysis of current and recent literature, and selective dissemination in answer to individual researchers' requests.

In connection with this project we have undertaken an exhaustive study of the sources of education research literature, in order to design an effective identification and acquisition system.

We wish to invite your cooperation in our efforts to identify sources of research literature and to estimate its annual accretion.

In order for a study to be considered relevant to this project, the following conditions must obtain:

1. It must report an empirical, systematic investigation.
2. It must permit prediction or generalization beyond the local setting of the study.
3. Its findings must be quantified.
4. It must contain either primary data or integrative secondary data.
5. It must be verifiable, in that it reports
    a. the validity and reliability of the data,
    b. analysis of the data, and
    c. findings and conclusions.

The studies may be:

1. reports of experiments;
2. surveys -- longitudinal or normative;
3. case studies;
4. causal-comparative studies;
5. bibliographies or reviews of the above.

We wish to be able to report on the existence of (and later on to acquire) all research conforming to the standards given above. We would appreciate any information you can provide, as suggested on the attached form. If you know of any related organizations which might provide similar information, would you please let us know whom to contact? A stamped, self-addressed envelope is enclosed for your convenience, and we will be very grateful if you can return the form within two weeks.

We will be glad to answer any questions which you might have about our project and to keep you informed of our progress.

Thanking you in advance for your help,

Sincerely,

Allen Kent
Associate Director

AK/jw

Please return this form to:

Mr. Allen Kent, Associate Director
Center for Documentation and Communication Research
Western Reserve University
Cleveland 6, Ohio

Reported by: (name) _____

(organization) _____

(address) _____

_____

1. Please list in the space below (or attach a list of) the educational research sponsored or conducted by your organization during the period of July 1, 1961 to June 30, 1962. Please give bibliographic data.

2. If you are unable to provide a list of research sponsored or conducted by your organization, please indicate below the quantity of reports completed during the period of July 1, 1961 to June 30, 1962.

Please return this form to:

Mr. Allen Kent, Associate Director
Center for Documentation and Communication Research
Western Reserve University
Cleveland 6, Ohio

Reported by: (name) _____

(department) _____

(college or university) _____

(address) _____

_____

1. Please list in the space below (or attach a list of) the educational research reports completed by your department between July 1, 1961 and June 30, 1962. We are interested in doctoral dissertations and masters' theses as well as other research reports. Please give bibliographic data.

2. If you are unable to provide a list of the educational research reports, please indicate below the quantity of reports completed during the period of July 1, 1961 to June 30, 1962.

APPENDIX C

Sources for Mailing List

SOURCES FOR MAILING LIST

Completed, in Process, and Anticipated Research Studies Reported by Large City School Districts, Research and Testing Department, City School District, Rochester, N. Y. (Rochester: 1962).

Directory of University Bureaus and Institutes (Detroit: Gale Publishing Co., 1960).

Education Associations, part 4, Education Directory, 1961-1962, U. S. Office of Education (Washington: U. S. Government Printing Office, 1962).

Foundation Library Center, 588 Fifth Avenue, New York, 36.

Higher Education, part 3, Education Directory, 1961-1962, U. S. Office of Education (Washington: U. S. Government Printing Office, 1962).

State Government, part 1, Education Directory, 1961-1962, U. S. Office of Education (Washington: U. S. Government Printing Office, 1962).

APPENDIX D

Tabulation of Returns from Questionnaires

	Dept. of Education	Dept. of Psychology	Dept. of Sociology	University (unspecified)	City Boards	State Boards	Professional Associations	Foundations
Doctoral Dissertations	338 145*	41	3	7	23	-	11	-
M. A. Theses	254 399*	44	5	143	11	1	13	-
Bulletins and Reports	112 551*	42	2	46 70*	28	210	165 21*	7
Faculty and Student Studies	17	7	-	1	-	-	-	-
Conference Papers	11	12	-	-	-	-	1	-
Books	4	3	-	2	-	-	10	3
Published articles	46	70	6	28	-	2	33	3
Post-Doctoral	-	1	-	-	-	-	-	-

* These figures are estimates given by respondents. No specific references were cited.

APPENDIX E

List of Journals

HIGH YIELD LIST*

Adult Education

Alberta Journal of Educational Research

American Association of Colleges for Teacher Education Bulletin

American Journal of Mental Deficiency

American Journal of Psychology

American Psychologist

American Society of Training Directors Journal

American Statistical Association Journal

Arithmetic Teacher

Australian Journal of Psychology

Automated Teaching Bulletin

A-V Communication Review

British Journal of Educational Psychology

British Journal of Psychology

California Journal of Educational Research

Canadian Journal of Psychology

Catholic Educational Review

Child Development

Child Development Abstracts

Dissertation Abstracts

DSH Abstracts (Deafness, Speech and Hearing)

Education

Educational and Psychological Measurement

Educational Research (British)

Educational Research Service Circulars

Elementary English

Ergonomics

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* Six or more relevant articles per year

Exceptional Children

High School Journal

Home Study Review

Indiana University, Bulletin of the School of Education

International Journal for the Education of the Blind

IRA Research Bulletin

Journal of Abnormal and Social Psychology

Journal of Applied Psychology

Journal of Business Education

Journal of Comparative and Physiological Psychology

Journal of Consulting Psychology

Journal of Counseling Psychology

Journal of Developmental Reading

Journal of Education for Librarianship

Journal of Educational Psychology

Journal of Educational Psychology

Journal of Educational Research

Journal of Engineering Education

Journal of Experimental Education

Journal of Experimental Psychology

Journal of General Psychology

Journal of Genetic Psychology (formerly: Pedagogical Seminary)

Journal of Home Economics

Journal of Mathetics

Journal of Medical Education

Journal of Projective Techniques

Journal of Psychology

Journal of Social Psychology

Journal of Speech and Hearing Disorders

Journal of Speech and Hearing Research

Journalism Quarterly

Library Research in Progress

Mathematics Teacher

Mathematics Teaching

Modern Language Journal

NAEB Journal

National Association of Secondary School Principals, Bulletin

National Business Education Quarterly

NEA, Research Bulletin

Nursing Research

Occupational Outlook Quarterly

Ontario Journal of Educational Research

Perceptual and Motor Skills

Personnel Psychology

Programmed Instruction

Psychologia

Psychologia Africana

Psychological Abstracts

Psychological Bulletin

Psychological Record

Psychological Reports

Psychological Review

Psychometrika

Quarterly Journal of Experimental Psychology

Reading Teacher

Research Quarterly of the American Association for Health, Physical Education, and Recreation

Review of Educational Research

Rural Sociology

School Life

School Review

School Science and Mathematics

Science

Science Education

Society for Research in Child Development, Monographs

Sociological Abstracts

Sociology and Social Research

Speech Monographs

Studies in Art Education

Teachers College Journal

Technical Education Abstracts

Theory into Practice

Training School Bulletin

University of Kansas Bulletin of Education

Vocational Guidance Quarterly

LOW YIELD LIST*

Administrative Science Quarterly

Administrator's Notebook

Adult Education Journal

Agricultural Education Magazine

AID (Auto Instructional Devices)

Air University Quarterly Review

American Annals of the Deaf

American Association of University Professors, Bulletin

American Business Education

American Catholic Sociological Review

American Journal of Pharmaceutical Education

American Journal of Public Health

American Journal of Optometry

American Journal of Sociology

American Mathematical Monthly

American Sociological Review

Annual Review of Psychology

Antioch College Reports

Art Education Today

Audiovisual Instruction

Australian Journal of Education

British Journal of Educational Studies

British Journal of Sociology

Canadian Research Digest

Catholic University of America Educational Research (and Monographs)

Central States Speech Journal

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* Less than 6 relevant articles per year

Child Development Monographs

(The) Clearing House - (Junior-Senior High School Clearing House)

College Board Review

College Composition and Communication

College English

Comparative Education Review

Computers and Automation

Contemporary Psychology

Eastern Arts Association Bulletin

Educational Administration and Supervision

Educational Forum

Educational Horizons (also called Pi Lambda Theta)

Educational Leadership

Educational Method

Educational Record

Educational Records Bulletin

Elementary School Journal

English Journal

Florida Journal of Educational Research

French Review

Fundamental and Adult Education

German Quarterly

Gifted Child Quarterly

Gulf School Researcher

Harvard Educational Review

Higher Education

Hispania

Human Relations

Institute of International Education, Open Doors

Italica

Journal of the Accoustical Society of America

Journal of Broadcasting

Journal of Chemical Education

Journal of Clinical Psychology'

Journal of College Placement

Journal of Education (Boston University)

Journal of Educational Sociology

Journal of the Experimental Analysis of Behavior

Journal of Health, Physical Education and Recreation
(also: Journal of the American Association for Health, Physical Education and Recreation and: Journal of Health and Physical Education)

Journal of Higher Education

Journal of Negro Education

Journal of Nursery Education

Journal of Personality

Journal of Research in Music Education

Journal of School Health

Journal of Secondary Education, California

Journal of Teacher Education

Junior College Journal

Louisiana Schools

Marriage and Family Living

Mental Hygiene

National Association of Elementary School Principals, Yearbook

National Association of Women Deans and Counselors Journal

National Catholic Educational Association Bulletin

National Elementary Principal

National Society for the Study of Education: Yearbook

North Central Association Quarterly

Optical Society of America, Journal

Our Teachers

Pacific Sociological Review

Peabody Journal of Education

Personnel and Guidance Journal

Phi Delta Kappan

Psychological Monographs

Public Opinion Quarterly

Quarterly Journal of Speech

Rehabilitation Literature

School and Society (combined with Educational Review)

Social Education

Social Forces

Social Studies (formerly: Historical Outlook)

Speech Teacher

Teachers College Record

University of Manitoba Faculty of Education Bulletin

University of Washington College of Education Record

Volta Review

Yearbook of School Law